

## Firearms/Toolmarks Discipline Proficiency Testing

### 1 Scope

This procedure outlines the methods for administering and recording Proficiency Tests (PT). This procedure applies to any personnel conducting forensic examinations in the Firearms/Toolmarks Discipline (FTD).

### 2 Testing Areas and Frequency

Each PT participant will complete at least one proficiency test annually within the firearms/toolmarks discipline that appears on the FBI Laboratory's ANSI National Accreditation Board (ANAB) Scope of Accreditation in which they are authorized to perform testing. Approved external proficiency tests will be obtained by the FTD.

The following components/parameters will be tested according to the stated frequency:

Component/Parameter	Frequency	Source
Firearms	One per calendar year	External
Gunshot Residue-Distance Determination	One per calendar year	External
Toolmarks	One per calendar year	External
Serial Number Restoration	One per calendar year	External

### 3 External Proficiency Tests

**3.1** PT participants will follow the *LOM Practices for Open Proficiency Testing*. External proficiency tests will be administered and distributed using Forensic Advantage (FA).

**3.2** An Examiner at each laboratory location will serve as the Proficiency Test Representative (PTR). In the absence of an Examiner, the affected Unit Chief (UC) will assign the appropriate personnel to serve as the PTR.

**3.3** The PTR will generate a *FTD Proficiency Test Evaluation Form* (Appendix A) with the distribution of proficiency test packets. Additionally, the PTR will ensure that proficiency test information is entered into FA according to the *LOM Practices for Open Proficiency Testing*.

**3.4** Each PT participant will be responsible for completing the appropriate examination records for the assigned test to the same extent performed in routine casework.

**3.4.1** An Examiner will review the examination records of a PT participant not authorized to issue a *Laboratory Report* and complete the remaining examinations as necessary.

**3.5** PT conclusions that require a verification will be performed by another Examiner who is qualified in the same discipline/subdiscipline.

**3.5.1** The verifying Examiner must have completed their examinations and submitted their results for technical review or must not be participating in the same PT cycle.

**3.6** The technical review will be performed by an Examiner who:

**3.6.1** Is qualified in the same discipline/subdiscipline, and has completed their assigned proficiency test in that same PT cycle, or is not a participant in the same PT cycle.

**3.7** The administrative review will be performed by authorized personnel or an Examiner who has completed their assigned proficiency test in that same PT cycle, or is not a participant in the same PT cycle.

**3.8** Technical and administrative reviews will be recorded according to the *FTD QAM Preparing, Reviewing, and Providing Results*.

**3.9** PT packets will be sealed and returned to the appropriate storage area when completed.

**3.10** PT records, to include completed external data forms, should be returned to the PTR or designee one week prior to the manufacturer's due date.

**3.11** Completed PT results will be submitted to the external test provider (data sheets can be completed electronically online).

## **4 Proficiency Test Evaluation**

**4.1** The PTR will retain external proficiency test packets until the results from the test provider have been received and evaluated.

**4.2** Upon receipt of the manufacturer's information and/or summary report, the appropriate UC and/or PTR will conduct an initial assessment of the proficiency test results/supporting documentation, and record any observations and/or inconsistencies on the *FTD PT Evaluation Form* as required in the *LOM Practices for Open Proficiency Testing*.

**4.3** Upon receipt of the individual reports, the PTR and affected Unit Chief(s) and/or FTD Technical Leader (TL) will conduct a further assessment and evaluation of the PT results. If it is determined the PT results are 'satisfactory', the evaluation will be recorded on the PT

Evaluation Form. If an inconsistency or non-consensus result is noted, the UC and FTD TL will continue to Section 4.4.

**4.3.1** If the PTR or FTD TL is the source of the inconsistency or non-consensus result, the affected Unit Chief(s) will assign an evaluator, who is qualified in the same discipline/subdiscipline to conduct the evaluation.

**4.4** If an inconsistency or non-consensus result is noted during the assessment of the PT results, the appropriate UC and FTD TL will determine the type of inconsistency and initiate any required action in accordance with the *LOM Practices for Open Proficiency Testing* and *LOM Practices for Addressing a Nonconformity*.

**4.5** If an analytical/interpretive inconsistency is identified, the appropriate UC and FTD TL will review the external proficiency test packet and supporting examination records of the affected PT participant. Any action required as a result of this review will be completed in accordance with the *LOM Practices for Open Proficiency Testing* and *LOM Practices for Addressing a Nonconformity*.

**4.6** Upon completion of the PT Evaluation by the appropriate UC and/or FTD TL, the PT results will be made available to the PT participant as outlined in the *LOM Practices for Open Proficiency Testing* and recorded on the *FTD PT Evaluation Form*.

## **5 Internal Proficiency Tests**

**5.1** Internal proficiency tests are administered when an external proficiency test cannot be provided. An internal proficiency test will utilize a retained external proficiency test sample which was never assigned to a proficiency test participant. The PTR will follow the appropriate procedures outlined in the *LOM Practices for Open Proficiency Testing*.

**5.2** The PTR will ensure a *FTD Internal Proficiency Test Preparation Form* (Appendix B) and *FTD Internal Proficiency Test Results Form* (Appendix C) are completed. These forms will be completed and included in each test packet to fulfill the requirements for test preparation and ensure the necessary information is recorded as outlined in the *LOM Practices for Open Proficiency Testing*.

## **6 Proficiency Test Records**

**6.1** All proficiency test records as outlined in the *LOM Practices for Open Proficiency Testing* will be retained permanently within the appropriate laboratory location.

**6.2** PT information will be entered in FA by the PTR as outlined in the *LOM Practices for Open Proficiency Testing*.

## 7 References

ISO/IEC 17025 – General Requirements for the Competence of Testing and Calibration Laboratories, International Organization for Standardization, Geneva, Switzerland, 2017.

FBI Laboratory Quality Assurance Manual, Federal Bureau of Investigation, Laboratory Division, latest revision.

FBI Laboratory Operations Manual, Federal Bureau of Investigation, Laboratory Division, latest revision.

Rev. #	Issue Date	History
7	10/02/17	Original issue for Firearms/Toolmarks Discipline, which includes the Firearms/Toolmarks Unit and the Scientific Analysis Unit/Toolmark Group. Existing document modified to include Huntsville, AL satellite location.
8	04/15/21	Section 2 updated to replace ASCLD-LAB title with ANAB title; category of testing replaced with discipline/subdiscipline throughout; Sections 3.6.1, 3.6.2, and 3.6.3 combined into new 3.6.1; Section 3.7 edited to mirror new Section 3.6.1; Section 4.5 edited for grammar; References updated to reflect current external accreditation documents.

**Approval**

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Firearms/Toolmarks  
 Acting Unit Chief

Date: 04/15/2021

Scientific & Biometrics  
 Analysis Unit Chief

Date: 04/15/2021

Firearms/Toolmarks  
 Technical Leader

Date: 04/15/2021

**QA Approval**

Quality Manager

Date: 04/15/2021

**Appendix A: *FTD Proficiency Test Evaluation Form***

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**Appendix B: *FTD Internal Proficiency Test Preparation Form***

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**Appendix C: *FTD Internal Proficiency Test Results Form***

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